

Customer No.: 31561  
Application No.: 10/709,716  
Docket No.: 13225-US-PA

### REMARKS

#### Present Status of the Application

The Applicant would like to thank the examiner for the review and examination of the application, and especially for the kindly allowance of the subject matter of claims 35 to 36.

The Office Action has rejected claims 1-3, 7-9, 13-14, 17, 19-24, 28-29, 34 under 35 USC 102(e) as being anticipated by Cho et al. (US-6,814,434, hereinafter "Cho").

Furthermore, claims 4-6, 10-12, 14-16, 18, 25-27, 31-33, and 37 are rejected under 35 USC 103(a) as being unpatentable over Cho et al. (US-6,814,434, hereinafter "Cho") in view of Haruta et al. (US-5,182,579, hereinafter "Haruta").

After entry of the foregoing amendments and traversing of rejections, claims 1-34, and 37-39 remain pending in the present application, and reconsideration of those claims is respectfully requested. Claims 38 and 39 are rewritten from original claims 35-36 to include all of the limitations of the base claim in accordance with the Examiner's suggestion, and no new matter has been introduced in new claims 38 and 39.

#### Discussion of the claim rejection under 35 USC 102(e)

*The Office Action has rejected claims 1-3, 7-9, 13-14, 17, 19-24, 28-29, 34 under 35 USC 102(e) as being anticipated by Cho et al. (US-6,814,434, hereinafter "Cho").*

In regards to claims 1 and 17, the following claim limitation is patentable over Cho: "without compression contact with an inner wall of a bottom of said housing". Cho teaches of with compression contact in col. 3, lines 27-40 via the pressure rib 60 configured to be higher than the feeding pipe 40 to press the ink absorbent body 25,

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thereby obtaining capillary actions. The lower portion of the ink absorbent body 25 in Cho is compressed by the pressure rib 60 and thus a density thereof is increased. (col. 3, lines 16-19 and lines 35-37). On the contrary, the lower portion of the ink absorbent body (i.e. an ink storage unit) of the present application is not compressed by the pressure rib or the like to obtain local higher capillary actions.

Furthermore, the following claim limitation in claims 1 and 17: "said ink storage unit being above said ink pipe and having a gap with a top of said ink pipe" is also patentable over Cho.

Contrary to the assertion by the Examiner, the space between 50 and 25 in Cho is not meant to be interpreted as an actual design feature because of the following arguments:

1) if it were a design consideration, it would have been identified as an element and be fully described to satisfy enablement and description requirements under 35 USC 112, especially to be given a height just like in h' in Fig. 2;

2) Fig. 2 contains undulating surfaces for the ink as well as a tiny air space on the right lower corner of 25; similar to the so-called "unmarked gap" by the Examiner, these are merely expressions of artistic license without any significant for technical teachings, as would be understood by one skilled in the art;

3) the specification in Cho also clearly teaches of having no such gap: "and a filter 50 disposed at an upper end of the feeding pipe 40 and a pressure rib 60." ...." The ink filter 50 is disposed at the upper end of the ink feeding pipe 40....."; and

4) if the space were to be a legitimate design feature, it would have been drawn to be more of a straight line.

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Based upon the above traversal, claims 1 and 17 should be allowed.

In regards to claim 7, the claim limitation "further comprising a sheet" is patentable over Cho. In Cho, the pressure rib 60 is configured to be higher around the ink filter and ink feeding pipe to press the lower portion of the ink absorbent body as discussed above. The "sheet" of claim 7 of the present invention and the Pressure Rib 60 in Cho are of very different elements:

- 1) a sheet is a flat object;
  - 2) the pressure ribs are a type of ribs, so there are a plurality of them arranged vertically / perpendicular to the plane of the bottom inside the housing;
  - 3) both are of different shapes; sheet is flat and even, whereas ribs are irregular;
- and
- 4) unlike the ribs, the sheet is not pressed by means of compression.

Based upon the above traversal, claim 7 is allowable.

In regards to claims 21 and 22, the following claim limitation "a belt inserted into said ink storage unit to tighten the bottom of said ink storage unit" is patentable over Cho. Cho does not teach of having a belt or any of the above claim feature and limitation. As a result, claims 21 and 22 should be allowed.

In regards to claims 9, 10, 11, 12, 30, 31, 32, and 33, a pressure rib 60 and not a sheet is taught in Cho, therefore, without the hindsight or the teachings of the "sheet" of the present invention, there is no motivation to apply the following teachings "a first adhesive material behind the ink storage unit and the pressure rib 60 for adhering said ink

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storage unit onto said pressure rib 60, and a second adhesive material between said pressure rib 60 and the inner wall of the bottom of said housing for adhering said pressure rib 60 onto the inner wall of the bottom of said housing and/or said ink storage unit is welded to said pressure rib 60, and said pressure rib 60 is welded to the inner wall of the bottom of housing and/or said ink storage unit is welded to said sheet by heat sealing or ultrasonic welding, and said pressure rib 60 .....” as described by the Examiner in the Office Action on pages 4-5. Furthermore, the description in the quote by the Examiner in the Office Action on pages 4-5 is not just a design expedient, since it can enhance the effect of airtightness between the ink storage unit and the bottom of the ink cartridge to prevent air bubbles from accumulating at the inner wall of the bottom of ink cartridge. On the contrary, when a portion of the ink pipe does not contact or does not completely contact the ink storage unit or pressure rib 60, as can be seen from Fig. 2 of Cho containing a tiny air space on the right lower corner of 25, the ink storage unit is not airtight with the ink pipe/pressure rib. Hence, when the air enters into the ink cartridge and forms air bubbles, the bubbles would be accumulated between the ink storage unit and the ink pipe/pressure rib, or within the ink pipe. The bubbles will block the ink pipe or the filter of the ink pipe so that the ink cannot flow into the ink pipe smoothly, and hence the ink cartridge cannot supply the ink smoothly and the printing quality will be adversely influenced. As a result, claims 9, 10, 11, 12, 30, 31, 32, and 33 should be allowed since not only there is no teach or suggestion from Cho but also Cho teaches away this application.

Pending the allowance of claims 1, 7, 9, 10, 11, 12, 17, 21, 22, 30, 31, 32, and 33,

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claims 1-3, 7-9, 13-14, 17, 19-24, 28-29 should all be patentable over Cho, and should be allowed.

**Discussion of the claim rejection under 35 USC 103**

*The Office Action has rejected claims 4-6, 10-12, 14-16, 18, 25-27, 31-33, and 37 under 35 USC 103(a) as being unpatentable over Cho et al. (US-6,814,434, hereinafter "Cho") in view of Haruta et al. (US-5,182,579, hereinafter "Haruta").*

Pending the allowance of claims 1, 7, 9, 10, 11, 12, 17, 21, 22, 30, 31, 32, and 33, claims 4-6, 10-12, 14-16, 18, 25-27, 31-33, and 37 should all be patentable over Cho in view of Haruta, and should be allowed, since there is no motivation, suggestion or teach for a person having ordinary skill in the art to combine Cho and Haruta to obtain the present application.

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**CONCLUSION**

For at least the foregoing reasons, it is believed that all the pending claims 1-34, and 37-39 of the present application patently define over the prior art and are in proper condition for allowance. If the Examiner believes that a telephone conference would expedite the examination of the above-identified patent application, the Examiner is invited to call the undersigned.

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Respectfully submitted,

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